

## DIABETES

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Diabetes can be a debilitating chronic condition that is characterized by elevated blood glucose levels attributed to an inability to produce enough insulin or properly use insulin.

About 29.1 million Americans suffer from diabetes, which accounts for \$245 billion in direct and indirect costs. A person suffering from diabetes will have over two times the medical expenditures of a person who does not have diabetes. South Carolina has the 4<sup>th</sup> highest prevalence of Type 2 diabetes in the nation at 14%. Costs due to diabetes in South Carolina is projected to be \$5.4 billion. Some people, however, are at a greater risk for developing diabetes than others.

### Risk Factors

There are two types of diabetes – Type 1 and Type 2. While the exact cause of Type 1 diabetes is unknown, there are factors that can increase a person's risk. Risk factors include: family history of Type 1 diabetes; environmental factors, such as some viral exposures; presence of damaging immune system cells or autoantibodies; dietary factors, such as low vitamin D intake and/or premature exposure to cow products or cereals; and residence in certain geographic regions.

Similarly, there are factors that can increase a person's risk for developing Type 2 diabetes. Risk factors include: family history of Type 2 diabetes, increased fatty tissue associated with obesity, physical inactivity, race, age, hypertension, and abnormal cholesterol and triglyceride levels. Fortunately, many of these risks can be reduced.

### Prevention

Type 1 diabetes is primarily related to non-modifiable factors, so prevention is focused more on Type 2 diabetes. Type 2 diabetes can largely be prevented through making simple lifestyle changes.

Reducing excess weight up to 5-7% of a person's total body weight, can reduce the risk of developing Type 2 diabetes. Increasing physical activity to at least thirty minutes of moderate activity per day five days per week can help to reduce excess weight, lower blood glucose levels, and increase sensitivity to insulin. Improving one's diet by eating fewer calories and eating a wider variety of food that is low in fat, high in fiber, and high in whole grains can also reduce one's risk. In many cases, diabetes can either be prevented or the effects can be reduced.

### Prediabetes

Prediabetes is characterized by elevated blood glucose levels that are above normal but lower than the threshold for Type 2 diabetes. Unfortunately, there are no obvious symptoms of prediabetes. Those with prediabetes are more likely to later be diagnosed with Type 2 diabetes and to have heart disease and/or a stroke. Prediabetes can be prevented, thus reducing the risk for Type 2 diabetes.

### Signs & Symptoms of Diabetes

Signs and symptoms of Type 1 diabetes can happen quickly and cause a person to feel sick. Symptoms include: increased urination, increased thirst, increased hunger, increased fatigued, blurred vision, sudden

and unintentional weight loss, nausea, and vomiting. Signs and symptoms of Type 2 diabetes do not typically appear as quickly as those for Type 1 diabetes, which makes Type 2 diabetes more difficult to diagnose. Common symptoms between Type 1 and Type 2 diabetes are: increased urination, increased thirst, increased fatigue, and blurred vision. Additional symptoms of Type 2 diabetes include: frequent infections, slow healing cuts and sores, and neuropathy in the extremities.

## Diabetes & Medication Management

When managing diabetes, it is important to keep blood glucose levels regulated through lifestyle changes and medications prescribed by a physician. It is also important to keep glucose levels within the recommended range. Typically, a fasting blood glucose should be between 80-130 mg/dl and below 180 mg/dl two hours after eating. Food, exercise, and different medications can affect blood glucose. As a result, it is important to regularly check blood glucose levels in order to make decisions about food, activity, and medications. However, talking with one's physician can help determine exactly how often to check one's blood glucose levels. Physicians may prescribe oral medications, insulin, and/or other injectable medications to help lower blood glucose levels. Poorly managed diabetes can lead to other comorbidities, complications, and death.

## Complications

While diabetes itself can pose serious health risks, diabetes can also increase a person's risk for other chronic conditions and comorbidities such as, heart disease, hypertension, stroke, kidney disease, vision problems, neuropathy, amputations, and death.

## Feet & Wound Care

Neuropathy of the extremities and slow healing wounds increases a person's risk for infections, complications, amputations, and hospitalizations. In order to reduce these risks, a person with diabetes should regularly check themselves, especially their feet, for cuts, bruises, and swelling. In addition, it is important to keep clean, dry, and moisturized feet.

## Early Detection

To decrease the risk of complications associated with Type 1 and 2 diabetes, early detection and treatment is key. People who have multiple risk factors for developing diabetes should talk with their primary care provider.

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